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| Notice of Allowability | Application No. | Applicant(s) | |
| | 10/718,062 | NGO ET AL. | |
| | Examiner Hai L. Nguyen | Art Unit 2816 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to the application filed on 11/20/2003.
2. The allowed claim(s) is/are 1-15.
3. The drawings filed on 20 November 2003 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some*
 - c) None
 of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

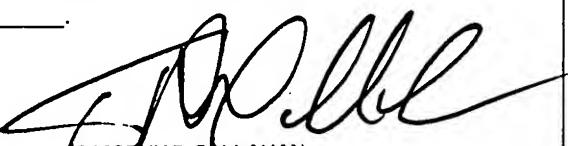
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 20 November 2003
4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other _____.



TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800
Part of Paper No./Mail Date 20050412

DETAILED ACTION**REASON FOR ALLOWANCE**

1. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to disclose or fairly suggest a voltage controlled oscillator (400 in Fig. 4) having a VCO output signal (435) with selectable frequency ranges, as recited in claim 1, having specific structural limitations such as M voltage controlled feedforward inverting (VCFF) circuits (403, 404, 407, 408, 411, 412, 415, 416, 419, 420, 423, 424, 427, 428), each VCFF(J) having a control voltage input (450), a signal input I(J) coupled to a corresponding node N(J), where J is a number (1 to M), and a signal output X(J), the first number (M-2K) of the signal outputs X(1) to X(M-2K) are coupled to corresponding nodes N(4) to N(M-2K+3); first circuitry (430) for selectively coupling a first feedback signal selected from signals on K of first candidate nodes (N(M+1) to N(M-2K+3)), to node N(1), wherein K is an integer number greater than or equal to two and less than or equal to (M-5), in response to the one or more latched select signals (431), thereby generating the VCO output signal; second circuitry (436) for selectively coupling a second feedback signal from signals on K second candidate outputs X(M-1) to X(M-2K+l) to node N(2) in response to the one or more latched select signals; and third circuitry (437) for selectively coupling a third feedback signal from signals on K third candidate outputs X(M) to X(M-2K+2) to node N(3) in response to the one or more latched select signals; and being configured in combination with the rest of the limitations of the base claims and any intervening claims.

Art Unit: 2816

Claims 5 and 10 are allowed for similar reasons; note the above discussion with regard to claim 1.

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai L. Nguyen whose telephone number is 571-272-1747 and Right Fax number is 571-273-1747. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The official fax phone number for the organization where this application or proceeding is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1562.

4. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2816

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HLN 
April 12, 2005